In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.-24. (Cancelled)

25. (Currently amended) A method for manufacturing a soft magnetic film comprising a step of forming a $Co_xFe_y\alpha_z$ alloy film by electroplating in a plating solution <u>having a Fe ion concentration in the range of 1.0 to 2.0 g/l</u> using a pulse current, wherein the component ratio X of Co is 8 to 48 mass%, the component ratio Y of Fe is 50 to 90 mass%, the component ratio Z of the element α (the element α is at least one of Ni and Cr) is 2 to 20 mass%, and the equation X + Y + Z = 100 mass% is satisfied.

26. (Original) A method for manufacturing a soft magnetic film according to Claim 25, wherein the plating is performed in a plating solution having a ratio of Fe ion concentration to Co ion concentration of 1.5 or more and a ratio of Fe ion concentration to α ion concentration of 2 to 4, whereby a $Co_xFe_y\alpha_z$ alloy film is formed in which the component ratio X of Co is 23 to 32 mass%, the component ratio Y of Fe is 58 to 71 mass%, the component ratio Z of the element α is 2 to 20 mass%, and the equation X + Y + Z = 100 mass% is satisfied.

27. (Original) A method for manufacturing a soft magnetic film according to Claim 25, wherein the plating is performed in a plating solution having a ratio of Fe ion concentration to Co ion concentration of 1.5 or more and a ratio of Fe ion concentration to α ion concentration of 2 to 3.4, whereby a $Co_xFe_y\alpha_z$ alloy film is formed in which the component ratio X of Co is 23.3 to 28.3 mass%, the component ratio Y of Fe is 63 to 67.5 mass%, the component ratio Z of the element α is 4.2 to 13.6 mass%, and the equation X + Y + Z = 100 mass% is satisfied.

28. (Original) A method for manufacturing a soft magnetic film according to Claim 25, wherein the plating is performed in a plating solution having a ratio of Fe ion concentration to Co ion concentration of 1.7 or more and a ratio of Fe ion concentration to α ion concentration of 2 to 3.4, whereby a $Co_xFe_y\alpha_z$ alloy film is formed in which the component ratios, X of Co, Y of Fe, and Z of the element α, are in the area surrounded by three points (X, Y, and Z) of (26.5, 64.6, and 8.9 mass%), (25.5, 63, and 11.5 mass%), and (23.3, 67.5, and 9.2 mass%), and the equation X + Y + Z = 100 mass% is satisfied.

29. (Original) A method for manufacturing a soft magnetic film according to Claim 25, wherein the plating solution contains sodium saccharin.

30. (Original) A method for manufacturing a soft magnetic film according to Claim 25, wherein the plating solution contains 2-butyne-1,4-diol.

31. (Original) A method for manufacturing a soft magnetic film according to Claim 25, wherein the plating solution contains sodium 2-ethylhexyl sulfate.

32. (Currently amended) A method for manufacturing a thin-film magnetic head including a lower core layer composed of a magnetic material, an upper core layer which opposes the lower core layer at an opposing surface opposing a recording medium with a magnetic gap provided therebetween, and a coil layer for supplying a recording magnetic field to the lower core layer and the upper core layer, the method comprising:

~~a step of~~ forming at least one of the lower core layer and the upper core layer composed of a soft magnetic film by plating according to a manufacturing method as recited in Claim 25.

33. (Currently amended) A method for manufacturing a thin-film magnetic head according to Claim 32, further comprising ~~a step~~ ~~of~~ forming a bulged lower magnetic pole layer on the lower core layer so as to be exposed to the opposing surface opposing the recording media, wherein the bulged lower magnetic pole layer is formed of the soft magnetic film by plating.

34. (Currently amended) A method for manufacturing a thin-film magnetic head including a lower core layer, an upper core layer, and a magnetic pole portion which is provided between the lower core layer and the upper core layer and which has the width in the track width direction formed smaller than that of each of the lower core layer and the upper core layer, the method comprising:

~~a step of~~ forming a lower magnetic pole layer in contact with the lower core layer, an upper magnetic pole layer in contact with the upper core layer, and a gap layer provided between the lower magnetic pole layer and the upper magnetic pole layer so as to form the magnetic pole portion; or a step of forming an upper magnetic pole layer in contact with the upper core layer, and a gap layer provided between the upper magnetic pole layer and the lower core layer so as to form the magnetic pole portion,

wherein at least one of the upper magnetic pole layer and the lower magnetic pole layer is formed of a soft magnetic film by plating according to a manufacturing method as recited in Claim 25.

35. (Original) A method for manufacturing a thin-film magnetic head according to Claim 34, wherein the upper magnetic pole layer is formed of the soft magnetic film by plating, and the upper core layer is formed of an NiFe alloy film by electroplating on the upper magnetic pole layer.

36. (Currently amended) A method for manufacturing a thin-film magnetic head according to Claim 34, wherein either at least one of the upper core layer and

the lower core layer has a portion ~~which is~~ in contact with a magnetic gap and ~~which is~~ composed of at least two magnetic layers, or at least one of the upper magnetic pole layer and the lower magnetic pole layer is composed of at least two magnetic layers, a magnetic layer in contact with the magnetic gap among the magnetic layers being formed of the soft magnetic film by plating.

37. (Original) A method for manufacturing a thin-film magnetic head according to Claim 36, wherein the magnetic layers other than the magnetic layer in contact with the magnetic gap layer are formed of an NiFe alloy by electroplating.